PART IV

CONTEMPORARY REPORTS

19

THAT ANNOYING AND DISGUSTING INSECT

Soldiers sing of their beans and canteens,
Of the coffee in old army cup,
Why not mention the small friends we've seen,
Always trying to chew armies up?

Those firm friends, tireless friends,
Hardly ever neglecting their hugs,
Their regard never ends--
How they loved us, those old army bugs.[1]

Since before the time that Alexander the Great conquered the ancient world, armies have marched and slept together. The more beastly the conditions in which soldiers have lived, the more small beasts have lived with them. Fleas, spiders, cockroaches, lice, and other creatures have always been as much a part of the soldier's life as his weapon--in fact, more so, because a soldier sometimes puts his weapon aside. But over the centuries, no insect has been so constant a presence in barracks as the one an American army surgeon of the 1850s execrated as "that annoying and disgusting insect, the cimex lectularius"--the common bedbug.[2]

Nothing--not even the army budget--had such an effect on the comfort of soldiers during the 19th century as that infamous pest. Its omnipresence made it a central feature of life in barracks. Its habits determined such things as the design of bunks and the institution of regulations on barracks sanitation. It was to a great extent because of the bedbug that the Army distributed manufactured bedsteads in the 1870s. But even that action could not separate the soldiers from their ancient companions, who infested the very buildings. When post commanders appealed for insect exterminators, they were told that the Army could not "afford to pay the expense of a bed bug war."[3] Not until World War II did the Army manage to banish the tiniest residents from barracks.

"Bedbug" is the common name for about 75 species of insects of the family Cimicidae (order Heteroptera) that live on the blood of man and other warm-blooded animals. The adult is reddish-brown, flat, broad, and typically less than one-fifth of an inch long with only vestigial wings. The pests announce their presence with a distinctive oily odor, which they probably use to attract one another for breeding. And breeding is something they do with a vengeance; the female lays an average of 200 eggs during one reproductive period and can produce three or more generations a year.

Bedbugs have been described as "among the most cosmopolitan of human parasites." They have bedeviled mankind for thousands of years, inhabiting virtually every kind of dwelling, hiding by day and emerging at night to feed, then returning to their hiding places to digest their meals. They feed by sucking the blood of their hosts and may require several days to digest the intake; adult specimens have been known to live over a year without eating. They are therefore very difficult to eradicate (without chemicals) once they have infested a building or its contents. Bedbugs stink up a room, are exceedingly irritating when they bite, and have as the only mitigating claim in their favor the fact that they are not known to transmit diseases to humans.[4]

Bedbugs were so unavoidable, albeit repulsive, a condition of barracks life that soldiers had simply to accept them with stoic patience. Inspectors, surgeons, and commanding officers throughout the 19th and 20th centuries cursed the pests, but could do little to thwart them. The men tried to shove them from their minds, so it is not surprising that except for an occasional song or joke the vermin only rarely appear in the reminiscences of soldiers. One veteran of the 1930s and 1940s, in recalling the nuisance, could have been speaking for his predecessors of centuries past:

> Nobody today realizes what a big part of the army life bedbugs played. . . . The big problem was the bedbugs at night. . . . You always had blood on your chest. . . . After

a while you got used to the fact that you had somebody else in bed with you. You just brushed them off and went back to sleep. We knew we had to live with them.[5]

In 1939, thanks to modern technology, enlisted men had more brutal weapons against the pests than those available in the 19th century. But the scheduled assaults on bedbugs owed much to earlier practices and were little more effective. Once a week the bedsprings were burnt with a blowtorch to kill the eggs harbored in them, and once a month the mattresses were taken to the post gas chamber for fumigation. But no insecticides were issued in barracks before World War II.[6]

The weekly overhaul of bedsteads was established at least as early as 1821 and may have owed something to an understanding of the insect's life cycle--or more likely, objection to its strong odor. But the overhauls occurred in daytime, when the tiny pests were in hiding--not just in bunks and bedding, but in floors, walls, and other parts of the buildings. Over the decades the Army tried whatever was in its power--refining and enforcing the regulations on barracks sanitation, designing bunks to be disassembled for inspection and cleaning, and finally adopting modern bedsteads and bedding--but the results were nil. The bedbug, which so much inspired the design of barracks furniture, proved remarkably adaptable to all changes. Other traditions of barracks life--winter huts, bedsacks, wooden bunks--passed away one by one, but the soldier's oldest companion remained with him.[7]

1. "Those Old Army Bugs" (to the tune of "Sweet Bye and Bye"), in Edward A. Dolph, "Sound Off": Soldier Songs from Yankee Doodle to Parley Voo (New York: Cosmopolitan Book Corporation, 1929), 317. This dates from the Civil War, according to Dolph. The second verse is the chorus.

2. Quoted in Chris Emmett, Fort Union and the Winning of the Southwest (Norman: University of Oklahoma Press, 1965), 201-02. The statement is from 1856.

3. Foner, United States Soldier Between Wars, 18. The year of that statement was 1886.

4. "Bedbugs," The New Encyclopaedia Britannica (30 vols., Chicago: Encyclopedia Britannica, 1976), Micropedia vol. 1:921.

5. Joseph R. Blaise, interview with the author, Oct. 30, 1981.

6. Ibid.

7. It was well within the Army's power to exterminate the pests in the 19th century, incidentally. The traditional home remedy for bedbugs has long been to ignite one or another mixture of ingredients containing sulfur, allowing it to smolder in a closed room. Of course, the room may not be used by humans for a day or so, which might be the reason that the Army evidently never adopted this widespread civilian practice. During the 20th century the commonest civilian fumigating mixture was one of sulfur and carbolic acid, sold in drugstores until recently. Carbolic acid became common after the mid-19th century and, after the adoption of the germ theory, was the principal medical disinfectant and was abundantly available in post hospitals from the 1860s on.

C.S. Forester, author of The African Queen and many other popular historical novels, has a grasp of the small details of daily life in the old days that exceeds that of most other writers and would shame most historians. Bedbugs and other vermin plagued navies as well as armies, and battles with them are reported by Forester in the series of novels about Horatio Hornblower. Some of the accounts offer instructive information, such as the following incident during the Napoleonic wars, from Lieutenant Hornblower (1951; paperback ed., Los Angeles, Pinnacle Books, 1974), 244:

> Now he had to wage war on the insect world and not on mankind; the Spanish prisoners in the six days they had been on board had infected the ship with all the parasites they had brought with them. Fleas, lice, and bedbugs swarmed everywhere, and in the congenial environment of a wooden ship in the tropics full of men they flourished exceedingly. Heads had to be cropped and bedding baked; and in a desperate attempt to wall in the bedbugs woodwork had to be repainted--a success of a day or two flattered only to deceive, for after each interval the pests showed up again. Even the cockroachs and the rats that had always been in the ship seemed to multiply and become omnipresent.

Equally futile painting of furniture and woodwork was occasionally reported in the American Army during the 19th century, but the baking of bedding--a logical procedure that may have presaged the post gas chambers of the 20th century--was not.

20
GENERAL CONDITIONS

A review of contemporary observations of American army posts before 1880 shows clearly that, with exceptions here and there, the soldiers at most places lived most of the time in substandard, often atrocious conditions. Not many posts were well constructed, and the budgets for maintenance and repairs were always too low.

There is little first-hand record of enlisted life for the earliest years of the 19th century. The army was small, and many of the enlisted men were foreigners or illiterates who did not record their (usually brief) experience of military service. Nor had the Army yet instituted the inspections and bureaucratic oversight functions that produced more extensive records in later years.

Before 1812 the scattered posts were small. Those on the frontier were generally built of logs and puncheons and were intended to last one winter. During the War of 1812 quarters were provided in great haste, if at all, and the most prevalent general condition was deprivation. For instance, in September 1812 the quartermaster general was ordered to construct winter quarters in the northern theater, but by December not one barrack had been completed at Green Bush, Vermont, among other places, and supplies of wood and straw were insufficient. The commanders at Plattsburgh, New York, and Burlington, Vermont, pleaded with the quartermaster general to furnish tools so that the men could furnish their shelters.[1]

After the war it is known that the general construction of army posts improved, with sawn lumber becoming more common--and probably with war-surplus woodworking tools more available at posts. A contemporary plan of Cantonment Missouri, Nebraska, probably typical of larger frontier posts built between 1817 and 1820, shows a hollow square of small, adjoining rooms built of horizontal hewn timbers, with board floors

and roofs, brick fireplaces, and log-and-mud chimneys. It is also known that in the years before 1821 troops came under criticism for putting too much time and energy into improvements in their living conditions and into unmilitary practices like gardening.[2] There was a flurry of fort-building on the frontier in the years from 1817 to 1820, but in the latter year Congress put a halt to all construction and repair. During the next half-decade, the existing posts deteriorated steadily.[3]

The repair and construction budget was restored in 1825, but things had come to such a pass at many posts that the following year Quartermaster General Jesup said of one of them, "The condition of the buildings at Fort St. Philip is such as not only to forbid everything like comfort, but to endanger the lives of the troops." He reported that new construction there was planned, "and materials have been collected in part for that purpose."[4] In general, the labor was provided by the troops, who furnished their buildings with simple wooden bunks, tables, and benches.

During the 1820s the military posts came under the eyes of inspectors general, who made continual tours of the Army. One of them, George Croghan, found much to his dismay that unmilitary activities received too much attention at some locations. In 1826 he penned a strong complaint about the diversion of troop labor to gardening and other things unrelated to the Army's mission:

> Look at Fort Atkinson and you will see barn yards that would not disgrace a Pennsylvania farmer, herds of cattle that would do credit to a Potomac grazier, yet where is the gain in this, either to the soldier or to the government? Ask the individual who boastingly shews you all this, why such a provision of hay and corn. His answer will be, to <u>feed</u> the <u>cattle</u>. But why so many <u>cattle</u>? Why--to eat the <u>hay</u> <u>and</u> <u>corn</u>.[5]

Obviously, troops so engaged were diverted from caring for their quarters, let alone military pursuits, and affected their barracks chiefly by filling them with the paraphernalia and fruits--and dirt--of husbandry.

Edmund P. Gaines toured the southern and western posts in 1827 and returned with a scathing indictment of the Army's housing. At the Post at Petite Coquilles, Louisiana, for instance, he dismissed the hospital building simply as "unsuitable," and in the barracks complained of "the inconveniences of a heavy police, with old but temporary and ill-constructed barracks, requiring frequent repairs. . . . The mess arrangements, and the condition of the barracks and bunks, though not altogether as perfect as under more favorable circumstances they should be, were quite as good as could reasonably be expected in these wretched barracks." Gaines found barracks at southern posts generally to be "wretched," and begged the surgeon general to join him in "urging the propriety of having good barracks and hospitals constructed." He objected especially to the prevalent overcrowding, suggesting that no barracks in the South could safely take more than four or five men to a room "during the sickly season."[6]

Gaines found things little better in the North. At Fort Crawford, Wisconsin, the wooden blockhouses and huts were "so much decayed as to be uninhabitable without extensive repairs," and even with repair they would have remained unhealthy. "The floors and lower timbers are decayed in part by frequent overflowing of the river, which has left the wood soaked and filled with damp sediment." Although, he said, repairs had recently been ordered, the floods would recur. Previous flooding had been as deep as 4 feet in barrack rooms, producing conditions so venomous that in October 1827--not nearly as bad as summertime, according to the surgeon--over one-fourth of the garrison was listed as sick.[7]

Military posts were established and abandoned, but one thing remained constant at most of them--living conditions were execrable. In 1838, at Fort Brady, Michigan, Croghan found things to be especially disgusting:

> The bunks are defective in this, that the lower tier, being on the floor itself, must of course remain damp for some time after the chambers have been washed out. I would remark that the chambers themselves from want of proper ventilation have in

> damp and warm weather a foul, unpleasant smell, which must become worse as the timbers of which the buildings are erected decay. To obviate this (in some degree at least), windows must be made on the rear of the several apartments to correspond with those in front.[8]

Upon the men inhabiting these "ordinary log cabins and block houses of the frontier," as Jesup called them,[9] the effects of such conditions were predictable. The surgeon general remarked in 1839 that it was safer for the men to face Indian warfare than life in the barracks. Those in Florida fighting the Seminoles, he said, had "suffered less from sickness, and lost fewer men by disease . . . than while they were stationary at their posts."[10]

It seems incredible that living conditions could continue to deteriorate without the Army correcting them. But in 1842, four years after Croghan's first description, things were even worse at Fort Brady:

> The quarters of both officers and men are in a dilapidated condition. The floors of all of them have sunk more or less. The doors no longer swing perpendicularly on their hinges; the porticoes are rotten; in truth, nothing is as it should be save the roofing, which is sound and tight throughout.[11]

Sixteen months later, however, at least at that post some repairs had been made, including the laying of new floors. But Croghan believed that Fort Brady had beome a hopeless case, "for truly patch as you may, the old barrack will fall to pieces from its own rottenness in a few years."[12] Only occasionally did Croghan find a military post to his liking. At Madison Barracks, New York, in 1843, for instance, "The quarters are in good repair, and as I had a right to expect, they are clean and neat."[13] But more typically at permanent posts, the men lived in "cramped and most unwholesome casemates. . . ."[14]

By the mid-1840s, the advancing frontier had drawn the Army to the edge of the Great Plains, but still near supplies of timber. Construction

techniques were gradually improving, and at some newer posts men lived in groups of two dozen instead of 12. When a post was very new it might be rather habitable, albeit primitive and overcrowded, as Croghan discovered at Fort Washita, Oklahoma, in 1844:

> The quarters of the men are convenient and comfortable; each company has two blocks or sets of houses, containing two rooms of 17 by 19 feet, separated by a hall or passage nine or ten feet wide. These houses are of oak logs hewn on the inside, and though built with no eye to permanency, they will nevertheless answer every purpose for some years or until the command can make bricks and provide the necessary lumber for the erection of barracks of a better and more durable description.[15]

But new log buildings swiftly became infested with vermin and began immediately to rot and pull apart. Within a span of years some military posts became downright hazardous, as was the case in 1844 at Fort Smith, Arkansas, an older post northeast of Fort Washita:

> The quarters of the commandant alone are in good condition. All the others, whether of officer or soldier, are rapidly approaching to dilapidation, and although at present habitable, they will in the course of a year or two tumble down. In truth, but for the pains taken to avert such calamity by the use of props and other modes of strengthening, some of them would have been down ere this. They all stand upon wooden posts two or three feet high, which rotting of course cause the superstructure to settle and in some cases to separate, as none of them are held together by girders as is the case with the house of the commandant. All the buildings are put together somewhat after the Canadian manner, short logs let into grooved uprights and with no seeming regard to strength or durability.[16]

Conditions that year at another older post, Fort Gibson, Oklahoma, where the quarters were "sadly out of repair" and very uncomfortable, had recently gained slight improvement through demolition. The "pickets," or stockade, surrounding the buildings had been cut down and windows cut into the back sides of the barracks. "Pent up as they were before this change was made," Croghan averred, "the wonder is not that the men became sick but that any lived." The post hospital, which was also a shabby structure, had at least been ventilated better because it had been outside the fort walls. Reviewing the history of walled places like Fort Gibson, Croghan opined that the general absence of ventilation in army barracks had caused more casualties than had the Seminole Indians.[17]

Here and there, because there were no standard plans or uniform rules governing construction at temporary posts, the Army failed to heed experience and repeated the errors of the past. At Fort Des Moines, Iowa, only two years old on a new site in 1845, Croghan deplored the fact that all buildings had been erected with "round unbarked logs . . . finished in the plainest manner." Although he excused that on the grounds that no temporary post "ought to cost more than five hundred dollars," the fact remained that unbarked structures deteriorated much faster, and harbored greater populations of vermin, than those built of peeled or hewn logs or boards.[18]

The Mexican War left the Army spread over the continent and enjoying in the aftermath a larger budget than before. But transportation took the lion's share, and it appeared that military posts in California might claim much of what remained for barracks and quarters. In that state the Army evidently wanted to make a good impression and set out to construct buildings properly finished inside and out. But circumstances sometimes made that difficult. At Benicia Arsenal in 1850, for instance, plastering was judged impracticable because of the unavailability of materials. Heavy lumber was imported from Oregon, and "ceiling with planed boards was substituted [for plastering]. To prepare these rough and hard boards with the hand plane was tedious and laborious, and has added largely to the time of construction, as well as cost," reported the quartermaster general.[19]

The efforts in the 1850s to construct a high-quality barracks at some posts meant that even less support was available for the others. At Fort Arbuckle, Oklahoma, in 1851, for example, the post surgeon reported that only hewn log barracks were planned, with puncheon floors.[20] The quartermaster general of the Department of Texas described the barracks at Fort Worth the same year as "quarters for one hundred and twenty men, built of logs and puncheons--without floors--mud and stick chimneys, with kitchen. . . ."[21] At Fort Duncan there were "six grass houses occupied by the companies, built entirely of willow poles and grass, no floors or windows."[22]

Although good barracks existed here and there in the 1850s, most of the men endured scandalous conditions. In 1853, Inspector General Joseph K.F. Mansfield reported that at Fort Conrad, New Mexico, "the quarters of both officers and soldiers are falling to pieces. The timbers had rotted away--some of the troops were in tents." The following year he dismissed the barracks at the post at Mission of San Diego, California, as "worthless: Company I occupies some miserably old adobe buildings, and Company F are in tents."[23] In 1856 the post surgeon at Fort Union, New Mexico, said that all of the barracks were literally falling down, but the men in them faced worse perils than collapsing roofs: ". . . unbarked logs afford excellent hiding places for that annoying and disgusting insect, the cimex lectularius, so common in this country, which it is by no means backward in taking advantage of, to the evident discomfort of those who occupy the buildings." Whenever the weather allowed, he said, the men almost always slept outdoors.[24]

But at least the men stationed in New Mexico were spared the rigors of the winters farther north. One enlisted veteran described life at Fort Pierre, Dakota, during the winter of 1856-57, as a terrible ordeal:

> Officers and soldiers suffered alike. The miserable huts in which we lived during the winter were unfit for stables. We almost froze in them, and when the spring came, the mud roofs leaked like sieves.

> I look back upon the winter passed at Fort Pierre as one of great suffering and hardship, by far the worst that I went through during my service.[25]

Even at many of the California posts conditions were awful. At Fort Miller in 1858 the barracks were described as six rooms whose condition was "very bad--Rooms small. No ceiling to four of the rooms. No bunks to same."[26] But in the late 1850s occasional attempts were made to improve things, especially the general absence of flooring. The floors in the six new stone barracks at Fort Davis, Texas, were described in 1858 as "flagged."[27] Even finer sanitary improvements were made to the infantry barracks at Fort Fillmore, New Mexico, the following year. They were floored with 10,000 red tiles. The fired-clay floor tiles, discovered in excavations in 1966, were light red in color, 8 inches square, and about 2 inches thick--certainly an improvement over the earth floors they covered.[28]

The fitful attempts at betterment came to an end with the Civil War. The only important barracks construction during that conflict was at training camps for volunteers. One veteran described the buildings as very simple:

> To such as are not familiar with these structures, I will simply say that they were generally a long one-storied building not unlike a bowling-alley in proportions, having the entrance at one end, a broad aisle running through the center, and a double row of bunks, one above the other, on either side. They were calculated to hold one company of a hundred men.[29]

As plain as the Civil War barracks and hospitals were, they were remarkably better buildings than most of those housing the Regular Army before and after the war. Typically, the balloon-framed buildings had dressed tongue-and-groove flooring, all lumber used for the bunks--often built in three tiers instead of two--was also dressed, and the hospitals and convalescent barracks, at least, had plenty of windows.[30] But the soldiers inhabited good buildings only during training or hospitalization.

Most of the time, they spent their summers in tents and their winters in small log huts roofed with tenting.

After the war the Army reverted to living conditions as primitive as any in its history. Some troops even lived in sod structures, as at Fort Sedgwick, Colorado, in 1866. Of such housing, an inspector complained, "Dirt, dampness, disease, vermin, all infest such structures, and the United States Government, I take it, means better than that by the faithful troops that serve it."[31] The government may have meant better, but it did not do better at many posts. The first quarters for the soldiers at Fort Griffin, Texas, in 1867-68, were 42 small one-room log huts, each measuring 14-1/2 feet by 8 feet, with walls 5 feet 10 inches high. Six men occupied each hut, with the only ventilation a small window at one end and the door at the other. The post surgeon blamed the living conditions for the high incidences of dysentery, diarrhea, and continued fevers among the men.[32]

At Fort Stevenson, Dakota, the barracks and hospitals built in 1867 and 1868 were floored, but with green cottonwood lumber. They warped and shrank when scrubbed, and the weekly washing soon caused the joists to rot.[33] Such sorry situations seem understandable, if not excusable, on the frontier. But the Army appeared unable in the late 1860s to do better even in civilized regions. The housing of the troops occupying the South contributed to such a high disease rate that the Surgeon General's Office made a special inspection in 1868. Perhaps the best enlisted men's quarters were to be found at Camp Emory, Georgia:

> The Quarters for the Cavalry are wooden boxes, floored[,] raised six inches above the ground, roofed with "A" tents. Average occupancy of each--six men. Each tent or box is furnished with three double bunks and has suitable racks for carbines and sabres; also, has a brick fire place, hearth and chimney.[34]

Quarters elsewhere were sometimes little better than the winter huts of the wartime campaigns.

In 1870 the deplorable conditions found in army barracks prompted the Medical Department's scathing Report on Barracks and Hospitals, which significantly influenced the first, tentative attempts at reform during the 1870s, including the distribution of single iron bedsteads. Although even worse conditions could be found elsewhere, Fort Buford, Dakota, received special attention in the 1870 report. The men there slept in triple-tiered bunks, apparently the last such remaining in the Army. The barracks containing the bunks were described by the post surgeon as atrociously dim buildings with little ventilation and no bathing facilities. They were so arranged that "steam and effluvia" passed from the kitchens to the quarters, making the latter "very disagreeable." Nor did the men take care of their quarters, according to the surgeon. "The fact that there is no store or lumber-room [store room] connected with the barracks is made evident by the accumulation of sundry articles in the kitchens, mess-rooms, and sleeping rooms, to the detriment of the good order and neatness of the quarters."[35]

Shabby barracks were not conducive to orderly living, and apparently in the years after the Civil War it was not only at Fort Buford that the soldiers wallowed like hogs. The Army seemed to be losing its traditional habit of neatness, demanded by the regulations from 1821 until the 1860s, if the reports of surgeons and inspectors are to be believed.

At Fort Davis, Texas, for instance, the barracks became so filthy in 1869 and 1870 that the post surgeon was instructed to make daily inspections and relate what he found to the post adjutant so that the men and their officers could be held to account. He made some headway, reporting some quarters "neat and more orderly," but usually he discovered clothing and bedding thrown around the rooms, an absence of uniformity in arranging the room contents, everything dusty, "and rubbish of various kinds thrown under the bunks." He also remarked that "there is in all the Quarters a want of system of arranging the boxes. Many of them being placed in the middle of the floor and used to sit on. I would suggest that several benches be provided for each Barrack."[36] The men at some other posts, however, behaved better. In the barracks at Fort Wallace, Kansas, "the cheerlessness of these accommodations is mitigated

by a rigid system of cleanliness and white-washing," according to the post surgeon.[37]

At the permanent fortifications on the East Coast, some things were more agreeable, but still in 1870 there was no uniformity, even within a single post. The men at Fort McHenry, Maryland, for instance, inhabited two sets of barracks. Those outside the fort on the northeast part of the sea wall were of brick, "large and commodious," two-story, with dormitories upstairs furnished with iron bedsteads, well ventilated, heated by stoves, and well lit with plenty of windows. The barracks inside the fort, however, offered overcrowded conditions, only 330 cubic feet per man, with inadequate ventilation. Although the rooms were plastered and ceiled, the men slept in pairs on two-tier wooden bunks.[38] But they were more fortunate than the men at Fort Pulaski, Georgia, who lived in 20 casemates, each housing ten men. The only heat was from open fireplaces, the only ventilation the chimneys, an outlet tube, two windows, and four embrasures. At least the men there slept in single bunks.[39]

The distribution of single iron bedsteads in the early 1870s did nothing to improve the generally shabby condition of the barracks. In 1872 the post surgeon at Fort Davis, Texas, bitterly condemned the way the men were housed:

> But two of the Barracks . . . are completed. Nor are they really finished. They were plastered inside, but very badly, and the greater part of the plastering has long since fallen off, and no attempts made to repair the walls. The barracks are very untidy, dirty, and disorderly. They have earth floors, which by want of proper attention, are very dusty--and soil all articles of clothing in the barracks. The mess rooms and kitchens are not plastered--have earth floors--and are equally as dirty and untidy as the barracks. Nor is the Place as well attended to as formerly. The troops are now supplied with single iron Bunks, and bedsacks filled with hay and blankets, but their beds are never tidy, or orderly.

Because the two other barracks at the post had not been completed, he pointed out, the men were also severely overcrowded.[40]

Even where better buildings were available, quarters were crammed and uncomfortable, as at the recruiting rendezvous at Newport Barracks, Kentucky, during the summer of 1872. One veteran of that place recalled:

> The last two days of our stay, we were kept shut up in our "quarters"--a big room on the third floor. The room was literally packed with recruits. The old "double decker" bunks--four men occupying each bunk--stood thickly along each side of the room.[41]

Through the 1870s there was only gradual improvement in the general conditions of barracks. As had been the case for almost a century, the buildings housing the men were mostly of primitive construction. Although many of them may have been tolerable when new, most of them deteriorated quickly. Incidental improvements like new bedsteads or an occasional coat of whitewash could not hide the fact that most soldiers did not have fit places to live. It was not until later, with army reform and the consolidation of posts, that barracks life in general became more comfortable, and those living it had more cheerful things to say about it.

1. Risch, Quartermaster Support, 170.

2. Ganoe, History of the United States Army, 151. See appendix B for the plan of Cantonment Missouri.

3. For support of all general statements in this part of the report, the reader is referred to part II.

4. ARQMG 1826, Mil. Aff. Doc. 334, 19 Cong. 2 Sess., ASP 18.

5. Prucha, Army Life, 7.

6. Bvt. Maj. Gen. Edmund P. Gaines, Report of a General Inspection of the Military Posts of the Western Department, and Remarks Concerning the Militia of the United States, Mil. Aff. Doc. 407, 20 Cong. 2 Sess. (1829), ASP 19: 110-12. Gaines was the department commander. His comment on numbers suggests that the 12-man room was the norm.

7. Ibid., 123-24.

8. Prucha, Army Life, 46.

9. ARQMG 1839, 114.

10. ARSurGen 1839, Sen. Doc. 1, 26 Cong. 1 Sess., 147.

11. Prucha, Army Life, 47.

12. Ibid., 50.

13. Ibid.

14. ArCommanding General 1843, 64.

15. Prucha, Army Life, 51-52.

16. Ibid., 52. Post-on-sill construction with timber in-fills was commonly called "Canadian" style in the United States during the 19th century.

17. Ibid., 53.

18. Ibid.

19. ARQMG 1851, 304.

20. Rodney Glisan, Journal of Army Life (San Francisco: A.L. Bancroft, 1874), 81.

21. ARQMG 1851, 270.

22. Ibid., 279.

23. Robert W. Frazer, Mansfield on the Condition of the Western Forts, 1853-54 (Norman: University of Oklahoma Press, 1963), 51, 143-44.

24. Emmett, Fort Union, 201-02.

25. Meyers, Ten Years in the Ranks, 106-07.

26. "Statement of the Number and Conditions of Buildings at Fort Miller, Cal. . . .," ARQMG, Miscellaneous Records Relating to Reservations and to Buildings, 1819-65, RG92.

27. "Annual Report of the Condition . . . of the Public Buildings at Ft. Davis, Tex.," QMConFile--Davis, Ft., Tex., RG92.

28. John P. Wilson, "One Hundred Years Later: Excavations at Fort Fillmore," El Palacio 74(Summer 1967):33, 37. Wilson's historical research discovered that the tiles were requisitioned for fiscal 1859.

29. John D. Billings, Hardtack and Coffee: The Unwritten Story of Army Life, The Lakeside Classics, no. 58, ed. Richard Harwell (Chicago: R.R. Donnelley, 1960; orig. pub. 1887), 35-36.

30. Typical hospitals and barracks built, probably in 1862, at Alexandria, Virginia, are described tersely in "Statements of Buildings, etc., erected. . . .," Miscellaneous Records Relating to Reservations and Buildings, RG92.

31. J.F. Rusling to Meigs, 12 Sept. 1865, quoted in Risch, Quartermaster Support, 484.

32. Carl Coke Rister, Fort Griffin on the Texas Frontier (Norman: University of Oklahoma Press, 1956), 65-66.

33. Ray H. Mattison, "Old Fort Stevenson: A Typical Missouri River Military Post," reprinted from North Dakota History 18(April and July 1951):30.

34. ROSG, Report on Living Conditions at Posts in the South, 1868-69, RG112.

35. Billings, Report on Barracks and Hospitals, 402.

36. RAGO, Medical Histories of Posts, Medical History of Fort Davis, RG94, entries for Jan. 5 and Jan. 7, 1870. See also Clary, "Role of the Army Surgeon," 57.

37. Billings, Report on Barracks and Hospitals, 310.

38. Ibid., 64.

39. Ibid., 149.

40. Medical History of Fort Davis, May 1872.

41. John E. Cox, Five Years in the United States Army: Reminiscences and Records of an Ex-Regular (1892; reprinted New York: S. Lewis, 1973), 12-13.

21

BUNKS AND ARM RACKS

Wooden army bunks, much cursed in their later years, appear to have drawn little recorded notice in the first two decades of the 19th century; they were probably far from universal. Nor did anyone thereafter offer much in the way of a description of the bunks at any post. The chief clues to their appearance in contemporary comments are criticisms of their defects or occasional deviation from the regulations. But all that the latter required of bunks was that each man have an upper and lower shelf and a peg for his shoes, and that the bunks be "overhaled" weekly.

Despite the absence of uniform guidance, a general pattern of bunkbed[1] construction appears to have become customary by the 1820s, although there was considerable variation from place to place. It can be inferred from inspectors' and surgeons' comments that the typical bunkbeds were freestanding, mostly two-level (sometimes three-level), superposed, framed boxes in which men slept in pairs. They were built on site by carpenters detailed from the ranks, probably with sawn lumber, sometimes dressed, sometimes not. Usually four men shared a two-level bunkbed, and six shared a three-tier model (with at least one nine-man, three-level arrangement reported). Arm racks were usually attached to the bunks or bunkbeds. The structures were designed for weekly disassembly, suggesting that pegs or locking wedges rather than nails usually held them together. It can be inferred that the general pattern was a frame of four stout corner posts joined by two sets of side and end boards or rails. The latter probably had tenons inserted through mortises in the corner posts, secured there by removable wedges, although other arrangements are possible. The side or end boards supported the boards forming the bunk bottoms. Shelves usually projected from the ends. Finally, wooden bunks were sometimes painted--in a futile attempt to close harbors for bedbugs.

There was a contradiction inherent in the construction of bunkbeds. On the one hand, they had to be sturdy enough to hold four or six men. On the other, they had to be readily disassembled. It is apparent that at no post were both ends served equally, and most quickly became rickety, "crazy things indeed," as an observer called them.

The earliest comment on bunks at an army post came from an officer of the 6th Infantry at Cantonment Missouri, Nebraska, in January 1820. He was highly critical of the filthiness of the men's quarters and attributed much of the problem to a faulty bunk design: "The construction of the bunks in the Rifle Regiment does not appear to be calculated for the enforcing of a rigid police on account of the vacancy next the floor."[2] It might be inferred from that that the idea of elevating bunks with an air space beneath was relatively new, possibly a result of the increasing use of lumber in fort construction. It can also be inferred that the men of the two regiments at the post erected bunks of differing patterns--those of the riflemen elevated, those of the infantry not.

By 1826 the absence of uniformity in bunk construction among the several posts caused Inspector General Croghan to ask that a standard design be prepared and distributed, but that apparently never happened.[3] In fact, the very existence of bunks was not universal, as suggested by the comments of Gaines at Fort Crawford, Wisconsin, in 1827. He remarked that the police and discipline of the post were good, "notwithstanding the rough, dirty, and decaying barracks, without bunks, render it impossible to keep the clothing, bedding, arms, &c, in as good order with equal or even increased attention, as at Fort Snelling."[4]

George Croghan devoted more attention to the construction of bunks than any other officer of the 1820s and 1830s. He seldom encountered any of which he approved. And some arrangements, like those he found at Fort Wood, Louisiana, in 1829, were in his opinion terrible:

> The form of the bunks is not perhaps in conformity with that prescribed by regulation and is certainly not suited to this

> locality and climate, which would cause us to separate rather than crowd sleepers together. The widest bunks that I have seen hitherto are less than three feet wide, but these are at least five feet and of three tiers in height, and each tier calculated to lodge three instead of two persons, as usual.[5]

That comment, albeit negative, is actually very informative. It confirms that the typical bunkbed held four men in two tiers: The nine-on-three arrangement at Fort Wood was exceptional. It also suggests that bunks had in fact become quite narrow, at least since the reduction of the straw allowance in 1821. That implies that the bunks were actually boxed in with sideboards, which would not only combine the straw but keep the men from falling from their halves of the typically less-than-three-feet width.

Croghan also reported that bunks became rickety through use. Those at Fort Howard, Wisconsin, in 1831, were "now after 8 or 10 years' service (as may be supposed) crazy things indeed."[6] Poor design or construction techniques could also, he believed, shorten the life of the bunks and make them even more disagreeable than they were to begin with. Witness those at Fort Winnebago, Wisconsin, in 1838:

> Bunks in bad condition and irreparable. The very circumstances which induced their being built as they are, with timber far beyond the usual size, has contributed to their present craziness, for although size may give strength, it at the same time affords, as in this instance, greater surface for the growth of this pest of the country--the bed bugs, which by compelling an almost constant overhauling of both bunk and furniture necessarily hastens the destruction of both.[7]

If bunks raised from the floors were unfamiliar in 1820, they were evidently the norm in 1838, as Croghan's criticism of those at Fort Brady, Michigan, suggests: "The bunks are defective in this, that the lower tier, being on the floor itself, must of course remain damp for some time after the chambers have been washed out."[8] But even properly

designed bunkbeds were objectionable, as Croghan said in 1842 of those at Fort Crawford (an 1829 replacement of its earlier namesake that Croghan had visited in 1827):

> Bunks and arm racks. Both were so well made and of such durable materials under the searching eye of Brigadier General [Zachary] Taylor when the barracks were being built that they are very nearly as good and serviceable as they were in the first instance, when I reported them to be in exact conformity with regulation. Complaints are made of their bulkiness and the difficulty of taking them apart as often as could be wished, to rid them of the bugs which are frequently very troublesome, but this inconvenience must remain and without remedy so long as we have wooden bunks, for they can not be made more portable and answer at the same time for the accommodation of four men each.[9]

At Madison Barracks, New York, the following year Croghan discovered that the bunks were all old and built in different patterns, some with attached arm racks, others without. He elaborated on the contradiction inherent in wooden bunk construction:

> Though old and a little crazy, they may be made to answer for some years to come. The chief objection to an old bunk is that when once infected by bugs, it can not be rid of them without great inconvenience and trouble, for if it be taken down with a view to a thorough examination, the chances are that it can not be put together again.[10]

But at Fort Towson, Oklahoma, in 1844, Croghan discovered very few bunks at the post, "and such as there are worth nothing." They were so infested with bedbugs that the men slept "either upon the galleries or the floor of their quarters." The post quartermaster was planning to "furnish all the quarters with new bunks, so constructed as to be easily taken down, an essential quality where they require to be so frequently overhauled." He was also going to provide new arm racks to replace

those that Croghan described as "little better than the bunks and improperly made as well as badly arranged."[11]

Some time between 1829, when Croghan criticized the nine-man bunks at Fort Wood, and the start of the Civil War, the customary width of bunks increased from under three feet to four or more. Unfortunately, it appears that no one commented upon that development. Given the fact that bunks were designed and built separately at each post--each quartermaster attempting to devise a pattern that would stand up to the stress of weekly disassembly--there probably was no deliberate, general effort to widen the bunks. Rather, without uniformity throughout the Army, bunks of various widths probably could be found at the several posts, those with larger barrack rooms likely to have larger bunks. If there was a dividing point, a time when most army bunks were now wider than three feet, it probably was after the Mexican War.

It was suggested earlier that the earliest bunks may have been relatively wide and that the common width was reduced with the reduction in the straw allowance after 1821. Narrower bunks would make smaller straw beds thicker, therefore more comfortable. It can also be supposed that smaller bunks would conserve another valuable commodity--boards. The larger straw allowance before 1821 probably reflected a tradition of rough sleeping arrangements; more straw would provide better sleeping on floors or on rough puncheon bunks or pallets. But by 1821 sawn lumber was generally available for several applications at military posts, probably including the construction of bunks. Board bottoms would afford reasonably comfortable sleeping with a reduced allowance of straw. Economy and changing technology would therefore have gone hand in hand in the 1821 regulations on straw.

But boards were expensive if purchased and slow to produce if whipsawn on site--and they were needed for several things besides bunks (roofs, shutters, floors, etc.). Narrower bunks would help to reduce the money or labor required to produce boards for barracks construction. But over the years the Army became less exclusively dependent upon whipsaws. As portable sawmills became generally more abundant, more and more of

them appeared at military construction sites--at the same time that civilian lumber was falling in price (for the same reason). By the 1850s, boards had become far more available than before for all applications, so the conservative motivation favoring narrower bunks declined. At Benicia Arsenal, California, during fiscal 1850, for instance, the Army spent a total of $840,351 on lumber for building construction, of which $5,000 went for lumber for "the manufacture of bunks, office furniture, &c."[12] What size the bunks might have been is open to speculation, but they need not have been kept small because lumber was in short supply; it was plentiful.

Something else was also at work. Throughout the period probably the single most important determinant of the size of bunks at a post was the space available in the rooms where they were to be installed. By the 1850s the average size of barrack rooms had expanded considerably. Bunks therefore did not need to be kept small merely because of space limitations.

At new posts not endowed with the Division of the Pacific's generous construction budget or with powered sawmills, older practices persisted after the Mexican War. Camp Arbuckle, Oklahoma, was hastily thrown together during the winter of 1850-51, and all its buildings were of logs with log-and-mud chimneys. "The men," reported the post surgeon, "occupy a long building about twenty-five by two hundred feet, divided into about four rooms, besides the kitchen. They sleep on rude bunks, made of split logs and clapboards, placed two and a half feet from the floor."[13]

Something else that was new appeared in a few barracks during the 1850s--iron bedsteads. Augustus Meyers enlisted at Governors Island, New York, in 1854, and discovered that his training-barrack room was furnished with six iron double bedsteads and a single iron bedstead for the corporal. The double bedsteads folded to relieve crowding during the daytime. But later that year Meyers moved to Carlisle Barracks, Pennsylvania, where "the rooms were large enough not be crowded; but the bunks were the old-fashioned two-tier kind. Two men slept in each of the lower and upper bunks, and it was uncomfortable."[14]

The rush of volunteers at the beginning of the Civil War created an enormous demand for accommodations. At first, men were housed in whatever space was available in and around Washington. An engraving in the June 1, 1861 issue of Harper's Weekly shows men of the First Rhode Island Regiment housed in the Patent Building, and is the earliest known illustration of 19th century army bunks. Those appearing in the engraving were probably manufactured by civilian contractors and were probably reflective but not typical of army bunkbeds before or after the war. The units contained six two-man bunks in three tiers, joined end-to-end with a total of six corner posts. They appear to be nailed together rather than arranged for disassembly and had no storage shelves. Arm racks on one end consisted of a small shelf at the lower bunk and a wooden bar between the top and middle bunks, attached to the outside of the end. Pegs for cups and canteens were affixed to the end posts. The bunks were less than 3 feet wide. The men lay together head-to-foot (that is, in opposite directions) in each bunk tier.

A February 1864 Harper's Weekly engraving of "The Stag Dance," apparently in a barrack of some sort, shows a different bunk arrangement. There the bunks were boxes in two tiers, end to end, affixed to a side wall of the building. They too seem permanently assembled but rather wider than the ones in the Patent Building.[15]

Neither arrangement was typical of the temporary barracks built during the war. Almost universally, those buildings had no movable contents other than bedding and personal effects. Specifications like those for barracks built at five locations in New Jersey in 1862 probably were the rule for the first year or two of the war. The buildings were to measure 16 by 50 feet, 8 feet high, with doors at each end and three 6-light windows on each side. They were of rough-cut boards and battens, with gabled roofs of board and cement. "There are to be three tiers of bunks on each inside of the barrack, four feet wide," said the specifications. "The partitions and outer board of each bunk to be six inches high, and sufficient in each building for ninety-six men to sleep in." The drawing accompanying the specifications shows each bunk to measure 4 feet even by 6 feet 3 inches and implies that the bottom bunks would be on the

ground. But a plan prepared after construction of the buildings shows the bunks measuring 4 by 6 feet even, in three tiers 2 feet apart, with the lowest 2 feet above the floor. Two years later floors were installed in the New Jersey barracks.[16] Not all the early training camp barracks conformed exactly to that pattern; many were 100 feet long with bunks in two tiers.

In approving plans for barracks for a New Hampshire regiment, the secretary of war at the end of 1863 directed that "the plan will be so modified as to limit the expense to what is absolutely indispensable for the comfort of the troops." It is hard to see what could have been reduced, since the plan was for a very simple two-story building measuring 114 by 24 feet, with officers' quarters, kitchens, mess rooms, and wash and store rooms below and two dormitories above. The bunks were to be double, measure 4 feet 2 inches by 6 feet 6 inches, "3 stories high," arranged along the walls at intervals of 3 feet, perpendicular to the walls. The windows were at every other interval, with three more on each end of the building.[17]

Another, possibly unique, sleeping arrangement in Civil War barracks was reported from an unidentified location in 1864. A soldier recalled that "the men slept on platforms twelve feet wide, which ran along each side of the long barracks, and accommodated twenty-five men in a row."[18] But three-tier, two-man (6 men total) bunks--paralleling the walls early in the war, perpendicular later--seem to have been the general rule. Although the Civil War barracks were special adjustments to the emergency, they necessarily adapted established practices. The fact that it was assumed from the outset that two-man bunks should be at least 4 feet wide, no matter how constructed, would suggest very strongly that bunks commonly had assumed that dimension before the war.

Away from the barracks, the armies spent their winters in huts much like those of the Revolution. A veteran's description of the homemade bunks in the winter huts is revealing not only for the Civil War but perhaps also for earlier practices:

> In entering a door at the end one would usually observe two bunks across the opposite end, one near the ground (or floor, when there was such a luxury, which was rarely), and the other well up towards the top of the walls. I say, usually. It depended upon circumstances. When two men only occupied the hut there was one bunk. Sometimes when four occupied it there was but one, and that one running lengthwise. There are other exceptions which I need not mention; but the average hut contained two bunks.
>
> The construction of these bunks was varied in character. Some were built of boards from hardtack boxes; some men improvised a spring-bed of slender saplings, and padded them with a cushion of hay, oak or pine leaves; others obtained coarse grain sacks from an artillery or cavalry camp, or from some wagon train, and then by making a hammock-like arrangement of them thus devised to make repose a little sweeter.[19]

Although such arrangements had to be endured, they were not healthy. One army surgeon claimed afterward that there had been "an unnecessary waste of life in our late war" caused chiefly by "want of a suitable bed. Frequently there [was] nothing but some brush, and pieces of board saved from cracker-boxes and barrel-heads between the sleeper, his blanket, and the mud or frozen earth."[20]

Where "permanent" posts continued in use during the war and immediately after, their earlier sleeping accommodations persisted. For instance, at the musician-boys' training barrack at Governors Island, the folding iron bedsteads encountered by Meyers in 1854 greeted another youngster in the same room in 1864.[21] Nor did things change at Carlisle Barracks, where a room in 1865-66 "contained eight double bunks, each holding four men, that is to say, two in the lower tier and two in the upper," according to another veteran.[22]

The Army returned to "normal" after the Civil War, scattering once again to primitive outposts all over the frontier. But neither the men nor their doctors would accept the old four-men wooden bunkbed with the same docility as their predecessors. Single iron bedsteads had been promised by regulations for over a decade, but only a few had been delivered. In the late 1860s one enlisted man begged in writing that "provision be made for the men to sleep singly and alone and not keep up the present barbarous and unhealthy system of having the men sleep in couples summer and winter."[23] The post surgeon at Fort Harker, Kansas, agreed: "This, as is well known (aside from any immoral tendency) is a most objectionable form of bed."[24] But at least it was better than none at all; it was because the recruits at David's Island were sleeping on floors in 1867-68 that Rufus Ingalls developed his "Jack Bunk," discussed earlier.

Dr. Billings issued his scathing indictment of the Army's housing in 1870, supporting it with a detailed bill of particulars. Most of the soldiers slept in four-man, two-tier wooden bunkbeds, generally 4 feet wide, although here and there some men received better, others worse. Nearly every post covered in Billings' report made at least some mention of sleeping arrangements. The following are some selections.[25]

> [Department of Arizona] The bunks are built of cottonwood saplings, with slats of old packing boxes or stout willow branches. With few exceptions they are arranged in two tiers, like the berths of a ship.
>
> [Fort Benton, Montana] The bunks are double, and two storied.
>
> [Camp Bowie, Arizona] It has no other furniture than the rough bunks, constructed of poles, cut in the ravines near the post.
>
> [Fort Brady, Michigan] In addition to the other defects the men are supplied with double bunks 4-1/2 feet by 6-1/2 feet,

two tiers high, and designed to accommodate four men each. These occupy so much of the interior that the men have but little space in which to perform their ordinary duties and have comfortable places to rest.

[Fort Brown, Texas] [The barracks are each] fitted up with a sufficient number of single, two-tier wooden bunks, ranged down both sides of the room.

[Fort Buford, Dakota] The bunks are badly arranged in three tiers one above the other, each bunk holding two men.

[Fort Clark, Texas] Bedsteads are arranged in tiers, each 6-3/12 by 2-10/12 feet. There is a gun rack at one end and two shelves at the other, near the wall. These beds are placed at right angles to the walls, or across the barrack, in two rows.

[Camp Colorado, Arizona] Their only furnishings are crudely built bunks, raised a foot or more from the ground.

[Fort Colville, Washington] The room contains 25 wooden bunks, 3-1/2 feet wide, each occupied by two men.

[Camp Gaston, California] [One barrack has] thirty-eight double bunks in two tiers [another contains] in all forty-eight double bunks in two tiers, with accommodations for ninety-six men.

[Fort Gibson, Oklahoma] There are fourteen double bunks to accommodate 56 men.

[Camp Grant, Arizona] The bunks are rudely constructed, but single and well-raised from the ground.

[Fort Gratiot, Michigan] In the main building, the men are furnished with old-fashioned bunks, with two tiers of beds, each to accommodate two men. These bunks are about 4-1/2 feet wide and 6-1/2 feet long and are occupied by four persons, and are placed so closely together as to allow room barely to get between them.

[Fort Griffin, Texas] The beds consist of single wooden bunks.

[Fort Hays, Kansas] The beds are double-tier wooden bunks, two men sleeping together in each tier, four men in each bunk. There is a drawer for each occupant under the lower berth, and an arm-rack and shelf at the foot of the bunk, the whole arrangement being very objectionable.

[Fort Lapwai, Idaho] [The rooms] each contain seven bunks for the accommodation of 28 men.

[Fort Laramie, Wyoming] The barracks are all furnished with two tiers of movable bunks, constructed of rough white pine lumber, two men occupying each bunk when the companies are at the maximum.

[Post at Little Rock, Arkansas] Each one is supplied with a sufficient number of neatly painted two-storied bunks; the majority of them are single bunks, a few being double.

[Fort McHenry, Maryland] At present wooden two-story bunks are furnished these quarters [inside the fort], and are alike detrimental to morality, cleanliness and comfort; four men sleep in these bunks.

[McPherson Barracks, Georgia] Both iron and wooden single bunks, are provided.

[Camp Mojave, Arizona] Single bunks are used.

[Post at Mobile, Alabama] Bunks are of wood, measure 6 feet by 27 inches, and are single.

[Fort Pike, Louisiana] The men sleep in single, two story bunks furnished with . . . mosquito bars.

[Plattsburgh Barracks, New York] Each bunk is arranged for two men.

[Fort Sanders, Wyoming] Ordinary wooden double bunks, in one and two tiers, are used.

[Fort Stanton, New Mexico] The squad rooms . . . are furnished with double bunks in single tiers.

[Fort Stevenson, Dakota] There are in each dormitory ten new, neatly furnished, two-tier double bunks, capable of accommodating eight [sic] men each, or eighty in all.

[Fort Stockton, Texas] The men sleep on . . . wooden bunks, two men each, the bunks are of old lumber, and, having been made by the men, are of rough workmanship.

[Taylor Barracks, Kentucky] The bunks are of wood, each frame making four berths, two above and two below. All cracks, nail-holes, etc., are closed by putty to exclude bugs, but the success is small, the walls, roof, and ceilings of the buildings being full of them.

[Fort Totten, Dakota] The bunks are of wood, painted; each accommodates two men.

[Campe Verde, Arizona] The only fixtures or furniture, is a double line of bunks, two tiers high, each 4 feet wide, and accommodating four men.

[Fort Wadsworth, Dakota] Single wooden bunks are used, furnished with the usual bedding.

[Fort Wallace, Kansas] Each dormitory contains forty double bunks in two tiers, intended for eight men.

[Fort Craig, New Mexico] [S]ingle iron bedsteads are used.

[Fort Foote, Maryland] Iron bedsteads, similar to those used in the Hospital Department, are furnished . . . .

[Fort Hamilton, New York] The majority of the enlisted men sleep upon bedsteads composed of board slats, an inch thick, supported by iron trestles, and better adapted for the purpose than anything else in use.

[Fort Independence, Massachusetts] The bunks are each composed of two iron trestles, connected by slats; each bunk is intended for one man.

[Fort Jefferson, Florida] The men have iron bedsteads.

[Madison Barracks, New York] Each man has an iron bedstead, of the hospital pattern, to himself . . .

[Fort McHenry, Maryland] In these rooms [in the barracks outside the fort] iron bedsteads are used, which contribute greatly to the comfort of the men and neatness of the barracks.

[Fort Monroe, Virginia] The bunks used in the company quarters are similar to those which were made for the Hospital Department during the war, being iron frames with wooden slats. The bunks are furnished two to three men.

[Fort Union, New Mexico] . . . movable iron bunks [21 in each barrack room].

[Fort Washington, Maryland] It is also fitted with iron bedsteads.

The foregoing were selected partly for variety; it should be noted that over half the army posts at the time of Billings' report were supplied with nothing other than two-level, four-man bunkbeds built in some fashion of wood. The quotations also illustrate the difficulties associated with trying to draw a picture of the objects from contemporary reports. To some of the post surgeons who provided statements for Billings' report, the word "bunk" meant a sleeping platform, and a "double bunk" meant a bed for two. But to others a "bunk" was a two-level bunkbed, which for yet others was a "double bunk" that might house two or four men in all. Some of the doctors were very precise in their descriptions; others can be interpreted in several ways. Compare, for instance, Camp Gaston, where 48 "double bunks in two tiers" housed 96 men, with Fort Gibson, where 14 "double bunks" held 56 men. The eight-man monstrosities at Fort Stevenson must have followed their own pattern.

The growing number of iron-trestle, wood-bottom bedsteads, especially at the coastal fortifications in the Northeast, presaged the eventual adoption of the Barrack and Composite bunks, both of which were of that type. Some of the trestle bunks may have been the Miller bunk, and others perhaps Ingalls' Jack bunk. The use of the term "hospital pattern" evidently indicates nothing more than that the bedstead in question was on one level, for one man, because it appears to apply to iron and iron-and-wood bedsteads of different types. It is possible, however, that some of those reports reflect use in barracks of war-surplus hospital bedsteads purchased from the Medical Department.

The replacement of wooden bunks with general-issue models began in 1871, and by 1875 most soldiers slept alone on the new bedsteads.[26] About one-third of those in use by that time were of Meigs' Barrack model, although no more of them were purchased after fiscal 1872. Most of the remainder were the Composite No. 9 model produced under the contracts of fiscal 1872 and after, although over 3,000 of the earlier, straight-legged Composite bunks were distributed to certain posts during

1871. And apparently yet a third Composite bunk, the No. 10 (featuring the redesign without the shield rejected by Meigs in 1873), was waiting in the wings--but appeared only with purchases after 1879. At least 200 Coyle army bunks were scattered at posts where they had been tested, but there is no evidence that any more of them came into service. Finally, several earlier models of iron and iron-and-wood bedsteads continued in use until they became serviceable.

Although the receipt of the single iron bedsteads was often noted, thereafter they occasioned very little contemporary comment, except when, as with the tests of the Coyle army bunk, remarks were requested by higher authorities. Improvements over shared wooden bunks they might be, but the new bedsteads were no great pleasure to sleep upon--even when the soldiers did not fall off them, as apparently happened often. Like many other unpleasant but unavoidable conditions of barracks life, they were put out of mind. As a song popular in the Army said it:

> There's corns upon me feet, me boy, and bunions on me toes,
> And lugging a gun in the red-hot sun puts freckles on me nose,
> And if you want a furlough to the captain you do go,
> And he says, "Go to bed and wait till you're dead in the Regular Army, Oh!"[27]

Notes

1. The term "bunkbed," a modern derivation only rarely encountered in the 19th century, is used here for convenience's sake to represent an entire construction holding bunks or bed platforms on more than one level.

2. Sally A. Johnson, "Cantonment Missouri, 1819-20," Nebraska History 37(June 1956):126.

3. Kummerow and Brown, Enlisted Barracks at Fort Snelling, 12.

4. Gaines, Report of Inspection, 125.

5. Prucha, Army Life, 44.

6. Ibid., 45.

7. Ibid., 46.

8. Ibid.

9. Ibid., 48.

10. Ibid., 50.

11. Ibid., 51.

12. ARQMG 1851, 309-17.

13. Glisan, Journal of Army Life, 52. "Clapboard" was a general term for sawn boards; it does not necessarily imply the beveled or tapered cross-section common to siding boards.

14. Meyers, Ten Years in the Ranks, 2, 36.

15. "Sleeping Bunks of the First Rhode Island Regiment, at the Patent Office, Washington, "Harper's Weekly (June 1, 1861); "The Stag Dance," Harper's Weekly (February 6, 1864).

16. Drawings and specifications, and Maj. W.J. Newton to Maj. L.H. Pelouse, Jan. 6, 1864, in QMConFile--Barracks (New Jersey), RG92. See appendix B.

17. E.R.S. Canby to D.H. Rucker, 22 Dec. 1863, and plan, QMConFile--Barracks, Plans for, RG 92.

18. Matthews and Wecter, Our Soldiers Speak, 154-55. This sleeping arrangement had been used by the French in the 18th century; a 6-foot shelf survives at Fort Niagara, New York, according to William L. Brown III.

19. Billings, Hardtack and Coffee, 69-70.

20. E.W. Locke, Three Years in Camp and Hospital (Boston: Geo. D. Russel, 1870), 75.

21. Ostrander, Army Boy, 14-15. It should be noted that Ostrander's chapter on Governors Island is a flagrant plagiarism of Meyers', and accordingly should be taken with caution. The rest of his book, however, is apparently original and very useful.

22. H.H. McConnell, Five Years a Cavalryman: Or, Sketches of Regular Army Life on the Texas Frontier, Twenty Odd Years Ago (Jacksboro, Tex.: J.N. Rogers, 1889), 12.

23. Foner, United States Soldier Between Wars, 18.

24. Ebel, "Soldier-Doctors," 26.

25. Billings, Report on Barracks and Hospitals, passim. This all appears more completely in appendix A, with page citations.

26. See chapter 9.

27. "The Regular Army, Oh!" in Dolph, Sound Off, 6-9. This is the song whose chorus ends with the well-known "Forty miles a day on beans and hay, in the Regular Army, Oh!" Dolph says that there were several versions of this song, long popular in the ranks. The best known, from which the quotation is drawn, was written down for the vaudeville stage by Ed Harrigan in 1874.

22

BEDDING

The chief item of bedding provided to American soldiers in barracks before 1880 was the bedsack, although the regulations did not specifically allow for it until the 1850s. It is very likely, however, that bedsacks were supplied as a matter of custom, probably starting in the 1780s or even earlier. The straw allowance of 1801 was established according to the "palliass" for each two men, although that word vanished from the regulations by 1812. It is possible that the old distinction between "permanent" and "temporary" quarters might in the early years have kept bedsacks from being provided to most soldiers, but that does not seem likely. As a ruler of practice, custom was probably stronger than such legalism when it came to items so basic, and when bedsacks finally appeared in the regulations they were among the camp and garrison equipage that accompanied troops on the move. Further, it is believed that the Purchasing Department procured bedsacks before 1817. On the other hand, before the reforms in the several years after the War of 1812, supplies of many things actually fell short at many posts. The occasional absence of bedsacks at frontier posts must therefore be assumed. Their absence would militate in favor of bunks constructed as boxes to contain the straw, while their presence would facilitate the construction of bunks raised from the floor.

In his annual report for 1839, Commissary General of Purchases Irvine, explaining his estimate of materials and costs for army clothing for 1839 and 1840, presented the following list of materials required for one "Infantry bedsack, double":

4-1/4 yards 7-8 drilling
4-1/4 yards of 3-4 drilling
3 skeins thread
1 yard binding

That was apparently a change from earlier practice, as Irvine implied in a footnote: "Bedsacks, per estimates to the close of 1838, and also per statements furnished to the Secretary of War, require materials differing from the above, viz: Bedsack, double--8-1/4 yards 7-8 drilling; 3 skeins thread; and 1 yard binding."[1]

The foregoing raises three interesting points. The first is why the object was called an "Infantry" bedsack. There is nothing to indicate that different bedsacks would be provided to different arms, and no logical reason to suppose that such would be done--except that mounted men were required to be small of stature throughout the 19th century. But perhaps too much inference may be drawn from bureaucratic terminology. In any case, the term never appeared again.

Second, as of 1839 the War Department apparently redesigned the bedsack, probably as an economy measure, to be made of two different weights of drill. The heavier 7-8 drill probably formed the bottom, the lighter the top. This may have been the first change in bedsack construction to that point, in which case the footnote suggests the makeup of bedsacks since the War of 1812 or even earlier.

The third thing that Irvine's list suggests is that bedsacks were not adjusted to conform to the changing straw allowance or to the narrow bunks common in the 1820s and 1830s--implying either that the narrowing of the bunks was not official, which is likely, or that after 1839 they were to become officially wider, which except for the "officially" is also likely, or that the purchasing authorities were ignorant of practices in the field, which is definitely true. Bedsacks made from over 8 yards of material, whether filled to 4 or 6 inches' depth (both of which were later standards), would be large. Assuming the distribution of the material as averaging 4-1/8 yards per half (some greater trim loss would come with use of two materials, explaining the 4-1/4 yards after 1839), the gross dimensions of each averaged half (assuming also that 6 feet would be the desired length when filled) would be 63.6 by 84 inches empty. Shaving 12 inches or so from each dimension to allow for side depth, seams, and trim loss, the resulting bedsack would measure roughly 52 by 72 inches

when filled. In other words, double bedsacks before 1839 were wider than the bunks they typically occupied, and as wide as they ever were in later years--about 4 by 6 feet.

There is no information available on the actual construction of the early bedsacks. But it is likely that such a prosaic object was essentially unchanging; those of the 1780s (called "palliasses") probably were much like those described more fully in the 1870s and after. It was basically a rectangular canvas sack, either with stitched side panels or simply forming sides when filled. The top face had a slot or fly in the center bound at the edges and secured by ribbons. The color would be that grayish cast typical of ticking, although there is no reason to believe that bedsacks ever acquired the blue striping that became traditional with ticking--19th century illustrations suggest that bedsacks remained unstriped to the end.[2]

Apparently the bedsacks with two weights of material did not prove practical, as that design was abandoned by the time of the Civil War. In compiling specifications for wartime purchases in 1864, the Quartermaster Department set forth more descriptive requirements for bedsacks. Whether they repeated those already in use at Philadelphia, where all such articles had been procured before the war, or represented wartime revisions for simplicity's sake, has not been determined. At any rate, the following bedsack served the Army from the 1860s, if not before, well into the 1870s:

> Bed Sacks: cotton or linen drilling, of good quality, weighing 4 ounces to the yard; double bed sacks 72 inches long and 48 inches broad, the single bed sacks to have the same length but only 42 inches broad, each to have an opening in center 18 inches long to be tied together with 4 strings of tape each 3/4 of an inch wide and nine (9) inches long. The end pieces to be six (6) inches wide.[3]

Such a double bedsack could readily have been made with the amounts of material listed by Irvine in 1839.

In 1875, the Army for the first time supplied soldiers with places to rest their heads:

> To meet a want felt in the Army, the Secretary of War, on 18th September 1875, on recommendation of the Acting Quartermaster General, authorized issue of pillow-sacks to the troops. They are made from a very large stock of shelter-tents in store. Their issue has made it necessary to increase the monthly allowance of straw to enlisted men.[4]

Pillow sacks made of tenting canvas probably accounted for the majority of pillow sacks in use for many years. By the late 1870s, however, the Quartermaster Department apparently believed that it was necessary to prepare for the purchase of pillow sacks when the stocks of tenting ran out. In 1879, therefore, specifications were issued that described pillow sacks as nothing more than miniature bedsacks, made of cotton or linen drill or seven-ounce cotton duck "of good quality," measuring 27-1/2 by 17 inches when filled, and 3-3/4 to 4 inches deep. There was to be "an opening or fly on the seam in the upper side seven (7) inches long," fastened with two ties of cotton tape. Button-hole stitching was to secure the fly, and "ends of the sacks [were] to be cut square."[5] It is doubtful that any of these new pillow sacks appeared in barracks before 1880.

Also in 1879 the bedsack was slightly redefined. Thereafter it too was to be of "cotton or linen drilling or seven (7) ounce cotton duck of good quality." When filled, it now was to measure 6 feet 10 inches long by 31-1/4 inches wide and 4-1/2 inches deep. The opening in the center was to be 19 inches long, with a 1-1/4-inch stay-piece at each end, and fastened with four pieces of tape spaced at equal intervals. All seams were to be double, the ends cut square, and the opening button-hole stitched at both ends.[6] Once again, the bedsack was wider than the bunks it would occupy. The three models of single iron bedsteads authorized and in use in 1879 varied from 28 to 31 inches wide. It is no wonder that man and sack sometimes slipped off at night.

The only other item of bedding in general use before 1880 was mosquito netting, then commonly called "mosquito bar." It was in use as early as the 1820s[7] and probably had long been customary in mosquito-infested regions. The Medical Department used it extensively, making it a standard fixture of hospitals at least by the late 1840s.

The earliest surviving technical description is a specification dating from the Civil War:

> To be made of either cotton or linen of good quality. Double bars--72 inches long 60 inches wide. Single bars--72 inches long 30 inches wide 4-1/2 feet in height. Have a loop of white tape 4 inches long strongly sewed on all 4 upper corners. Double bar to have 2 additional loops of tape of same length 1/2 way between corner loops on each side.[8]

Along with bedsacks and pillow sacks, the mosquito bars were given new specifications in 1879, and like the other bedding, they no longer allowed for sleeping double:

> To be made of cotton or linen mosquito netting, and white cotton tape, equal in quality to the same materials in the standard sample.
>
> Seven (7) feet long, two (2) feet eight (8) inches wide, and five (5) feet eight (8) inches high.
>
> To be bound around top and down the four corners with white tape, and to have two (2) strings (white tape) nine (9) inches long, strongly sewed on each of the four (4) upper corners, and to conform in all respects to the standard sample.[9]

In other words, both the earlier and later mosquito bars were supposed to be oblong tents encasing the bedsteads in sheer drapery.

Bedding received less notice during the 19th century than did the wooden bunks it occupied for so long. One of the more descriptive reports was Meyers' account of his room at Governors Island in 1854:

> The beds consisted of a bedsack stuffed with straw, which was rolled up in the day time, and a pair of blankets, neatly folded, laid on top. There were no sheets nor pillows for the boys--the corporal was the only one who enjoyed these luxuries, and he had provided them himself. The boys slept on the bedtick and covered themselves with their blankets when it was cold, or used one of the blankets to lie on when it was warm enough, folding up a jacket or some other piece of clothing as a substitute for a pillow.[10]

That was a fair echo of Percival Lowe's account of accommodations a year earlier at Fort Leavenworth, Kansas: "A Bed sack, refilled with prairie hay (Arnold called it prairie feathers) once a month, and a pair of soldier blankets, with overcoat, or anything else one could utilize for a pillow."[11] Eugene Bandel found arrangements there little changed in 1856.[12]

Bedding received some attention in Billings' report on barracks and hospitals in 1870, but it paled in significance beside the double wooden bunks and the shabby, unventilated barracks. Most reports from the posts simply mentioned that the men slept on bedsacks filled with hay or straw, sometimes called "straw mattresses," "straw ticks," or "the usual bedding."[13] At Fort Laramie, Wyoming, some of the men were better off than the others:

> A few of the men have buffalo robes. The most of them are fain to protect themselves against the rigor of the winter by eking out their scanty covering with their overcoats. They nearly all complain of sleeping cold.[14]

A few reporting posts said that the straw or hay was changed monthly, one or two said the bedsacks were washed regularly, one or two more

said that the bedding was of high quality, but none criticized the suitability of straw bedsacks for sleeping. The abysmal double bunks were of more pressing concern.

Five years later, however, when Billings repeated his survey of the Army's housing, one surgeon did condemn the straw-filled bedsack, proposing for sanitary reasons that "wire mattresses, hair pillows, and sheets be furnished for the troops. . . ."[15] That would not start to happen for almost a decade.

Notes

1. ARComGenPur 1839, 299. Specifications and related documents on bedding appear in appendix I.

2. Note that if striping were desired, the last specifications issued in the 1870s would probably have called for it, such by then being the Army's way. Note also the absence of striping on the drawing in appendix I. On the other hand, photographs of Civil War hospitals often reveal striped mattresses or bedticks.

3. Quoted in Chappell, "Barracks Furnishings," 23. Kummerow and Brown, Enlisted Barracks at Fort Snelling, 14, trace this to that "unpublished quartermaster manual of the Civil War period" discussed earlier.

4. ARQMG 1876, 126. The sacks received 4 pounds of straw, since the allowance went from 12 to 16 pounds.

5. Specifications adopted Mar. 12, 1879, in ROOMG, Miscellaneous Specifications, RG92; also in ARQMG 1879, 408.

6. Specifications adopted Mar. 12, 1879, in both the foregoing sources.

7. Kummerow & Brown, Enlisted Barracks at Fort Snelling, 15n, cite an 1829 source that treats it as an established norm on the Gulf Coast. The connection between anopheline mosquitoes and malaria, a major health problem in America during the 19th century (the Army called it "intermittent fever"), was not known until 1898, however. The insects were simply a nuisance.

8. Quoted ibid., traced to the unpublished quartermaster manual.

9. ARQMG 1879, 407; ROQMG Miscellaneous Specifications, RG92.

10. Meyers, Ten Years in the Ranks, 2.

11. Lowe, Five Years a Dragoon, 76-77.

12. Eugene Bandel, Frontier Life in the Army, 1855-61, ed. Ralph P. Bieber (Glendale, Calif.: Arthur H. Clark, 1932), 102.

13. Billings, Report on Barracks and Hospitals, passim. See appendix A.

14. Ibid., 347.

15. Report on Hygiene, xviii.

23
BLANKETS

Probably the most traditional object supplied to soldiers, blankets were one of the few categories of barracks furnishings--albeit issued to the men, not for the barracks--that followed more or less standard patterns throughout the 19th century. Only during wartime did important deviations from standard occur to any significant degree. But although there was a gradual evolution of army blankets, and one major change of colors, some general characteristics persisted.

First, whether of cotton or wool, American army blankets seem always to have been twilled.[1]

Second, army blankets were usually napped, and specifications commonly demanded that the nap be "well raised."

Third, some specifications for army blankets during the 19th century required that they be fulled. Fulling, also called felting or milling, increases the thickness and compactness of wool by shrinking it 10 to 25 percent through the application of moisture, heat, friction, and pressure. The result is a smooth, compact, tightly finished product that may even resemble felt. This would have the effect, in wool blankets, of making them both more durable and more resistant to rain, as well as warmer.

Fourth, from the earliest evidence known, American army blankets were characterized by stripes at either end, generally about three inches wide. The stripes had a practical purpose, marking where single blankets were to be cut from the long strips in which they were loomed. Often they were cut into pairs for separation into singles when issued. In the earlier years many of the blankets also had "points," small stripes near one end, probably adopted from Hudson's Bay Company practice, each point usually representing about one pound of weight. And after 1821 the letters "U.S." in the center were distinctive of American army blankets. For

many years, all of the markings were indigo in color, but that was eventually changed to black, then later to indigo again.

Fifth, the blankets themselves were supposed to be uniform in color. For many decades--until probably around the time of the Mexican War--the army blanket was white, actually the creamy white characteristic of Hudson's Bay Company blankets. Thereafter, the blankets were a rich, dark gray.

Finally, until the development of more sophisticated specifications after the Civil War, blankets varied slightly from one lot to the next, according to the whims of the purchasing officer and the methods of the supplier. During the emergencies of the War of 1812, the War with Mexico, and the Civil War, when large purchases were made in haste, all standards went out the window, in practice if not officially.

Most army blankets during the 19th century were of wool, which is superior to most other textiles for warmth, durability, and shedding water. But thousands of cotton blankets were also purchased from 1808 until at least 1814. A contract for cotton blankets let in 1808--typical of a number of such contracts from that and the next year surviving in the files--is unusually descriptive of the character, appearance, and weight of army blankets for several decades:

> Five hundred three point twilled cotton Blankets, to have at each end a broad blue stripe & none on the sides; also to have on the side near the said stripe at the rear end next to the [illegible--wearer?] three small blue points about five inches in length; the blankets to be of the weight of three pounds & one half each when finished, and to measure in the same state full six feet in length & full four feet seven inches in width; the pile or nap to be well raised on the upper side, and to be as well raised as may be conveniently practicable on the lower side.[2]

Whether of cotton or wool, the general dimensions of 3¼ to 3½ pounds, measuring 6 feet by 4½ feet, with blue striping, were fixed for some time, in contract after contract. But there was some minor variation inevitable because of the absence of more detailed requirements. One contractor in 1812 imparted the following to the Purveyor of Public Supplies:

> Although we were satisfied with the texture & firmness of our Blankets, yet it would have been pleasing to have had a pattern by which to make them, or to have had some specific directions by which to govern ourselves. We should then have been certain of their being accepted.
>
> We are constructing a Machine to raise the Nap which promises less danger to the Blanket than the common method of doing it by hand, and wish to know if you would delay the delivery of the first parcel a week or two to give it a trial, as the experiment was undertaken in consequence of your Recommendation.[3]

Evidently the purchasing authorities during this period experimented with different blankets, of different materials or manufactures, and often permitted the suppliers to offer their own innovations. In 1814, an officer of the 36th Infantry reported that he had "had the delivery of a number of Patent Blankets. I took notice they were very durable, they keep the wet or dampness from the soldier better than the Common Blanket [such as was usually delivered soldiers]. I think they answer better than the Indian Blanket. They only want a little more in length."[4] What the Patent blanket was is not now apparent, but later that year a purchasing agent reported that he was about to buy 3,000 or 4,000 pairs of cotton blankets, each blanket 2 yards long, 1½ yards wide, and about 3½ pounds in weight.[5]

The purchase of cotton blankets apparently ended with the War of 1812. Thereafter, wool was the rule, and by 1816 the common blanket had expanded in size, although with roughly the same weight. That suggests that, although the blanket was fulled, it was probably thinner than earlier models. In that year Irvine contracted in Philadelphia for

> six thousand Blankets, of Wool, Six feet six inches long, and five feet wide, each Blanket to weigh fifty-four ounces. They are to be scoured quite clean, and well fulled, and are to be in all respects equal to the Blanket in this Office, on which this Contract is founded.[6]

Although in later years the Army would maintain its own standard models as patterns, at this period the "blanket in this office" was that offered as a sample by the contractor and judged to be a suitable product. Variation from supplier to supplier continued to be the rule, and as late as 1836 Irvine was quick to demand improvements: "The narrow blue stripe for the blankets of indigo dye, and of finer wool than that in the blanket to which you have referred, is approved."[7]

The major change in army blankets between the wars with Britain and Mexico came after January 1821, when the secretary of war approved this proposal from Commissary General Irvine:

> As Army blankets are frequently sold or bartered by Soldiers particularly on the recruiting service and it is extremely difficult to establish clearly, that Blankets thus sold are public property and to prevent the exchange of good blankets for those of inferior quality, I suggest for your consideration the propriety of having all Army blankets marked in the center thereof with the letters U.S. with indelible liquid.[8]

Evidently army blankets were always of such quality as to be highly desirable commodities. But the marking did not end theft or sale of them. As late as the end of the century an army song celebrated an occurrence that had long been commonplace:

> O'Reilly swiped a blanket and shoved it up, I hear;
> He shoved it for a dollar and invested it in beer.
> He licked a coffee cooler because he said he'd tell.
> He's ten days absent without leave. O'Reilly's gone to hell.[9]

As late as 1836, the army blanket remained much the same as in 1816, according to a contract that year:

> The blankets required for the soldiers are to be 6 feet 6 inches long and 5 feet wide. To be twilled, to be made of good wool, to have the nap well raised upon them on one side, and a little raised on the other, and each blanket is to weigh 4 pounds--also to have a blue stripe on each end, of indigo, about three inches wide--otherwise the blankets are to be white and perfectly clear of all foreign matter.[10]

Except for the change in weight, to 4 pounds instead of just over 3, the blanket still retained its longstanding dimensions. But sometime after that date, probably just after the Mexican War, the standard army blanket became larger and gray in color. Just when the change was made, and who decided the question, is not recorded, but it probably reflected both the difficulty of keeping blankets clean and the evolving manufacturing and dyeing technology of the textile industry. It is also likely that the Army recognized that its men needed blankets that were larger, heavier, and warmer. Not until 1861 did the appearance of the blankets become a subject of regulations:

> Blanket--woolen, gray, with letters U.S. in black, four inches long, in the centre; to be seven feet long, and five and a half feet wide, and to weigh five pounds.[11]

The standard army blanket retained essentially that appearance (including black end stripes not mentioned) until 1876. But looks aside, one other thing seemed never to change: When faced with an emergency, the Army never had enough blankets, at least not where they were needed. Troops in winter quarters at Camp Scott, Utah, in November 1857 during the Mormon "war," had only 723 blankets available for about 2,500 men. Supplies were backed up farther east because wagons were in short supply; the expedition had been organized too hastily.[12]

Even worse shortages developed at the start of the Civil War, such that in October 1861 the quartermaster general published the following plea in newspapers around the country:

> The troops in the field need Blankets. The supply in the country is exhausted. Men spring to arms faster than the mills can manufacture, and large quantities ordered from abroad have not yet arrived.
>
> To relieve pressing necessities, contributions are invited from the surplus stores of families.
>
> The regulation army Blanket weighs five pounds; but good, sound woolen Blankets weighing not less than four pounds, will be gladly received at the offices of the United States Quartermasters in the Principal towns of the loyal States, and applied to the use of the troops.
>
> To such as have Blankets which they can spare but cannot afford to give, the full market value of suitable Blankets, delivered as above, will be paid.[13]

As a result of such requests, not to mention hasty purchases of whatever was available, all sorts of nonstandard blankets appeared in camps and hospitals, especially during the first year of the war. Among them were the infamous shoddy blankets, but they disintegrated so rapidly that they could not for long be described as a significant presence in the quarters of the enlisted men.

The Quartermaster Department endeavored, not always successfully, to maintain minimum standards for acceptable substitutes for the regulation gray, 5-pound blanket. It demanded that only wool be supplied, but it was willing to compromise a little on the weight; it tried to retain the gray color, but things were not always as it wished them to be. As a result, a large share of the army blankets issued during the war were brown or tan in color (at least after exposure), with a good number of examples surviving today.[14]

Browns and tans were common among Civil War blankets because the technology required for high-quality gray dyeing was too complex to meet all wartime demands. As almost every Civil War enthusiast knows, the "Blue and Gray" were more generally the "Blue and Butternut," because improvised dyes used in most Confederate uniforms broke down in air and light, assuming the color of butternut instead of the regulation cadet gray--a color that itself owed its first appearance in the Army to shortages of blue uniform coats during the War of 1812 (or so tradition holds).[15]

The nonstandard brown and tan blankets of the Civil War were usually a mixture of gray-turned-brown yarns and unbleached, undyed yarns, with the stripes and letters U.S. of several shades of brown. The letters were sometimes woven or stamped into the blankets; sometimes they were crudely stitched as outlines--suggesting that some manufacturers may have intended to supply both sides of the conflict. The stripes appear to have been mostly interwoven. Otherwise, the nonstandard blankets generally resembled their standard gray counterparts, in form if not quality.

The Army also conducted its first experiments (outside hospitals) with waterproof blankets during the Civil War. By the end of the war the Quartermaster Department had settled on no single type, using both india-rubber and gutta-percha models. Most of them had a straight slit and flaps so they could be used as ponchos, with grommet holes at 14-inch intervals around the edges so they could be joined into shelters.[16] One veteran, who recalled that the chief advantage of sharing a bunk was that two men could thereby share two blankets, applauded the rubberized blanket. It could be used as an undersheet in bunks, just as it had served as a groundcloth outdoors, to keep the users warmer. In upper bunks in huts the men used the waterproof blankets as top sheets to repel leaking rainwater.[17]

For a few years after the war the Army drew its blankets from surplus stocks. Whether any nonstandard blankets were issued is not recorded

but is doubtful. By the early 1870s procurement had to resume. Reviewing what was available on the market, the Quartermaster Department decided in 1872 to adopt as an army standard a blanket offered by Mission Mills of San Francisco. Meigs reported that the new blanket featured better material and workmanship than any previously furnished. Mission Mills received a contract to supply the Army on the Pacific Coast, and after competition another contract was awarded to Sevill Scofield for the rest of the Army. "This blanket costs more than the old one," Meigs said, "but it is warmer, softer, and will be more durable than any heretofore issued."[18]

In basic appearance, the blanket remained as required by the 1861 regulations: 7 by 5½ feet, weighing 5 pounds. Otherwise it was

> to be gray in color, and made of pure long-staple wool, free from shoddy, reworked wool, or cotton, or any impure materials; to have the letters "U.S." in black, four (4) inches long, in the center, and to bear a strain of not less than twenty-five (25) pounds per inch for the warp and thirty (30) pounds per inch for the woof (weft) without tearing. Note: It is immaterial whether the letters "U.S." be stamped on the blanket or woven into the fabric.[19]

That was the most detailed technical specification to appear so far, but oddly enough it neglected to mention the stripes on the blanket ends. But they surely appreared on the standard contract pattern blanket, and therefore on all blankets issued, because they were mentioned as a matter of fact in a later report of the quartermaster general. He said they were black like the letters in the center.[20]

In 1875 the Quartermaster Department finally recorded its specifications for rubber blankets, but in a fashion that suggests that they had been in force in the Philadelphia office for some time:

> Blankets, Rubber. To be made of good strong unbleached muslin coated with India Rubber vulcanized; to be 46 inches

wide and 7 inches [sic] long, and be provided with brass grommets.

A piece of stront webbing 24 inches long for the purpose of tying on blanket with two extra grommets for same.

The grommets to be one inch from their centres to the edge of the blanket on one side and end, and two inches to the other side and end. The grommets must be stayed and placed equi-distant 14 inches apart so as to match.

Edges to be strengthened with an extra strip of rubber.

Furnished from Phila. Depot by Col. Easton March 2nd 1875.[21]

It is unlikely that the length of the rubber blanket was either 72 inches or 7 feet, not 7 inches. It appears to be consistent with those used in the Civil War. except that a single fabric and sealant had been settled upon at last. The rubber blankets were issued for field service, to be used as ground sheets and shelters from the rain. Technically speaking, there fore, they were not an item properly furnished in barracks, except as soldiers had them among their equipment. However, with leaky roofs common on the Army's shabby housing, it is likely that they would be found in use as needed.

Another change in Army blankets came in 1876 and was caused by persistent difficulties in black dyeing. Meigs reported that year, "As the black stripe and letters "U.S." now used to mark the Army blanket, appear to injure its durability, arrangements have been made to substitute indigo-blue letters and stripes in future contracts."[22] New specifications for the blanket, adopted in August 1876, changed the color and specifically required the stripes. But they went beyond that, evidencing an ever strong trend in army procurement toward technical precision and meticulous detail:

Specifications for Woolen Blankets. Each blanket is to be seven (7) feet long and five (5) feet six (6) inches wide, and to weigh five (5) pounds. To be gray in color, and made of pure long-staple wool, free from shoddy, reworked wool or cotton, or any impure materials; to have the letters "U.S." in dark blue, four (4) inches long, in the center; to bear a strain of not less than twenty-five (25) pounds per inch for the warp, and thirty (30) pounds per inch for the woof without tearing, and to have not less than twenty-two (22) threads of warp and twenty-five (25) threads of filling or woof to the inch. The threads to be well driven up. The stripes at ends of blankets to be dark blue, of pure indigo dye.

NOTE.--It is immaterial whether the letters "U.S." be stamped on the blanket or woven into the fabric; their color must be pure indigo dye.

Adopted by the Secretary of War August 23, 1876, in lieu of the specifications adopted August 15, 1873.[23]

1. For explanations of textile technology in this chapter I rely on the excellent article on the "Textile Industry," Encyclopedia Britannica, Macropedia vol. 18:170-89. Specifications and descriptions of blankets appear in appendix J.

2. Contract to Joseph Garlick and Daniel McGinnis, by Coxe, June 15, 1808, QMConFile--Blankets, RG92.

3. C. Hashfield to Coxe, Feb. 28, 1812, QMConFile--Blankets, RG92.

4. Statement of Lieut. W.C. Hobbs, dated George Town, July 19, 1814, QMConFile--Blankets, RG92. The "Indian Blanket" may have been Hudson's Bay Company.

5. P.M. Kell to Irvine, Dec. 29, 1814, QMConFile--Blankets, RG92.

6. Contract to McCallmont and Reilly of Philadelphia, 1816, QMConFile--Blankets, RG92.

7. Irvine to Richard Kimball, Feb. 8, 1836, quoted in Kummerow and Brown, Enlisted Barracks at Fort Snelling, 15.

8. The correspondence is presented as an appendix in Enlisted Barracks at Fort Snelling.

9. "O'Reilly's Gone to Hell," in Dolph, Sound Off, 54-66. Dolph says this song, which celebrates a number of "O'Reilly's" escapades, was written by Col. Gerald E. Griffen in "tribute" to the Irish sergeants of the old Army.

10. Irvine to Messrs. Burnham and Barker, Dec. 12, 1836, quoted in Kummerow and Brown, Enlisted Barracks at Fort Snelling, 15.

11. 1861 Regulations, par. 1571. Support for the suggestion that the larger gray blanket was introduced much earlier may be found in the 1851 listing of the shipping weights of equipment for one dragoon--a man's blanket and his horse's together weighed 9 pounds. ARQMG 1851, 253.

12. Risch, Quartermaster Support, 326.

13. Clippings of notice, Oct. 1, 1861, QMConFile--Blankets, RG92.

14. The following description is based on information in Chappell, "Barracks Furnishings," n.n. See appendix J for detailed descriptions.

15. On butternut, see for example American Heritage Picture History of the Civil War (New York: American Heritage, 1960), 363. Weigley, History of the United States Army, 144, discusses the tradition that the gray of West Point uniforms follows that worn by the regulars at Chippewa and Lundy's Lane.

Recent research (see appendix J) supports the contention that Civil War cloth goods were mostly gray when dyed, then turned brown upon exposure--not brown or butternut to begin with. William L. Brown III to the author, Jan. 13, 1982. The substandard dyes were not tolerated in smaller purchases before and after the war but probably were unavoidable during the wartime procurement crisis.

16. Risch, Quartermaster Support, 359.

17. Billings, Hardtack and Coffee, 73-78.

18. ARQMG 1872, 141-42.

19. Quoted in Chappell, "Barracks Furnishings."

20. ARQMG 1876, 127.

21. ROQMG, Miscellaneous Specifications, RG92.

22. ARQMG 1876, 127.

23. ARQMG 1877, 269; also in ROQMG, Miscellaneous Specifications, RG92.